KENTUCKY
Career and Technical Education

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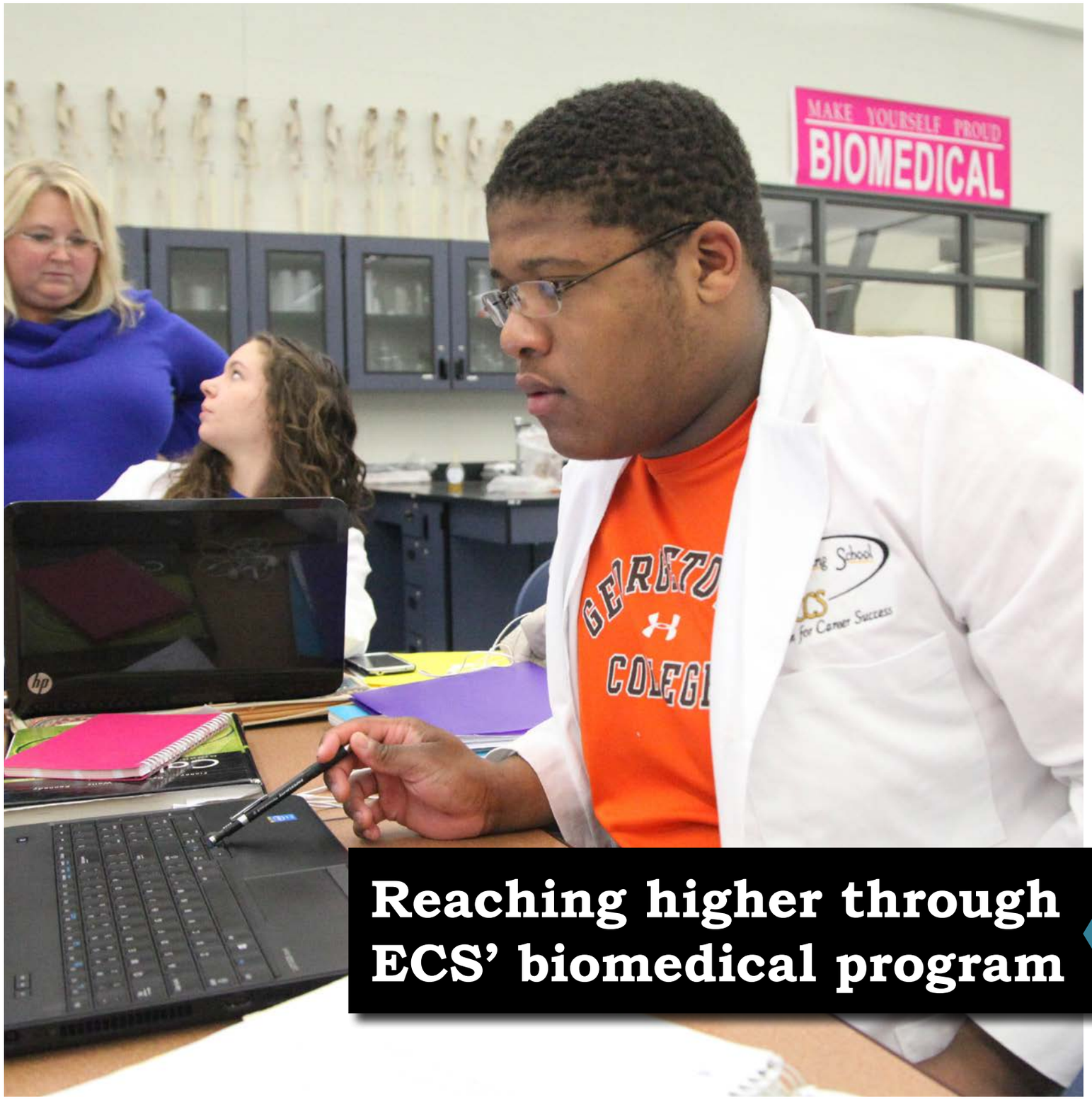

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Volume IX Winter 2015

Associate Commissioner's Notes

Greetings CTE Champions!

It is hard to believe that we have reached half-time of this school year but indeed we have and you know as well as I do, the busiest part of the season is coming up as regional and state student organization conferences will begin along with our testing windows.

I use these sports analogies because I feel as though we are a team and each school year is a new season of opportunities for our students guided by their teacher/coaches and administrators.

As we look back at the first half, I know you are drawing conclusions as how to keep up the pace and get our students to a big win and the next level of their educational endeavors.

In doing so, I think it is very important to remember the team aspect of building strong programs by utilizing the resources around us.

And some of our most valuable resources come by way of the relationships we have built among all CTE stakeholders including our business/industry and economic development partners, community leaders and postsecondary institutions, to name a few.

Our advisory committees have long provided assistance to our programs proving to be invaluable over the years, but as CTE is integrated more and more into the mainstream education playbook, fostering existing and searching out new partnerships with our community playmakers is critical to the continued success of CTE.

With our statewide and regional sector strategies initiatives in place, a groundwork has been laid to help guide our efforts. We are seeing more and more economic development leaders voice their support and, in fact, the need of CTE in their respective communities to not only help existing businesses find qualified employees but to persuade new industry partners to locate in their areas.

CTE, in my mind, is no longer an option but a necessity if we are going to create the workforce team needed to fulfill employment demands of the present and the future. Along with our postsecondary teammates including one of the most comprehensive community and technical college systems in the country, we have the caliber of players needed to make all of our teams successful.

And if they are successful, so too will be our students. Let's move through the second half of our school year focused on a winning season.

Thanks for all you do and go CTE!
Sincerely,
Dale Winkler
Associate Commissioner –
Office of Career and Technical Education

Upcoming CTE Events

February

FBLA Regional Leadership Conferences

2: KOSSA Online Begins (thru March 31st)

5-6: CTTE-UCC Conference, WKU

9: CTSO Officer Training SOLD Leadership Day

10: SOLD Leadership Day

16-27: WorkKeys Paper Testing

March

FBLA Regional Leadership Conferences

8-10: DECA State Career Development Conference

12-14: HOSA State Conference

16-20: NTI Five Day Workshop

23-25: KY TSA State Conference, Crowne Plaza Hotel, Louisville, KY

30: WorkKeys Score Reports for Paper Testing Begins (thru April 3rd)

31: WorkKeys & KOSSA Online Testing Ends

April

1-May 31: KY Tech Administrative Branch will begin and continue to share information around the FY15 Closing timelines. Submit any travel from January through June (and July through December if you ignored the December 22nd date!). Please do not wait!!!

3: WorkKeys Score Reports for Paper Testing Ends

16: KOSSA Results (May change based on discussion with OCTE Leadership and CTECS)

20-22: FBLA State Leadership Conference

22-24: NTI Three Day Follow-up (May change due to SkillsUSA State Conference)

22-25: SkillsUSA State Conference

25-28: DECA National Conference ICDC Orlando

30: WorkKeys Retesting Must be Complete

Kentucky Career and Technical Magazine is published quarterly by the Kentucky Department of Education's Office of Career and Technical Education. For more information about this publication or featured items, contact Tim Thornberry at tim.thornberry@education.ky.gov or call (502) 564-1270 extension 4229.

All photos and stories by Tim Thornberry unless noted otherwise.

Reaching higher through ECS' biomedical program

Dr. Julye Adams is not afraid to use the word "vocational" when talking about education. She believes students learn better by doing and with one visit to her classroom one can see that philosophy in action.

Her students are doing more than just looking at textbooks and taking notes. They are involved in real-world activities, but Adams' class is not what most would visualize when speaking the word "vocational."

She heads the Biomedical Sciences program at Elkhorn Crossing School (ECS) in Scott County. Biomed is the medical component of the Project Lead The Way (PLTW) curriculum, which "allows students to investigate the roles of biomedical professionals as they study the concepts of human medicine, physiology, genetics, microbiology and public health," according to information from PLTW.

But Adams said it's much more than that for her and her students, who look and act more like research scientists in a lab than teenagers in a high school classroom.

She said it's important to get them engaged and involved in activities that go beyond the standard curriculum.

"I want them thinking beyond the graduate school level; that's where I want them. There are holes in that which can get filled in, but it's about the experience along the way."

From the time the biomed students start the program as freshmen, they conduct research projects. Adams refers to her students as the experts in those chosen fields as they conduct that research. The students often seek information from other professionals in those research fields, scientists and people that do that type of work or research.

On a recent trip to the University of Kentucky College of Health Sciences, Adams said, students worked with faculty on activities that had already been a part of their classroom experience at ECS.

"The students had done those things throughout their PLTW career, so it was neat to watch them interacting with adults that were doing this for a living and to say to them, you have a skill that people get paid to do," she said.

Be it in the biomed lab or the welding lab, Adams said that hands-on activity really pays dividends.

ECS biomed student Brad Woodie melted agar to pour bacterial plates as part of his lab work. Students in the class are learning by doing a number of hands-on activities.

ON THE COVER: Zach Barber, a senior at ECS, looks over information he collected for his research project in the biomed class. In the back ground, student Camille Rieble asked a question of teacher Julye Adams.

"This is application all day long and real-world experience," she said. "And not just real work experiences doing experiments but experiencing deadlines, specific writing assignments and time management."

She noted that it is important to PLTW students to realize they are performing work-based activities because there are no industry certifications specifically for them as there are in other CTE programs. (KDE-CTE has recently linked EKG Technician and Pharmacy Technician certifications to the PLTW Biomedical pathway for Kentucky students, and biomed students take the Allied Health KOSSA.)

"There are a lot of states that put their biomed classes in their science departments as electives and they're not doing it as a CTE class," said Adams. "Those students don't get the experience that our students get."

Adams sees a real connection between the biomed program and conventional health sciences programs.

"I would be remiss if I didn't mention our health sciences program at ECS. They are doing projects in a way that, while the approach is little bit different from a content stance, will still give those students a great, real-world experience, and they get that in either program," she said.

Adams said much can be learned from a program such as hers and it isn't always necessary to use organizations such as PLTW to benefit from project-based learning.

"I believe in what we are doing and that marrying the science and math with the career path is extremely important," she said. "I'm a big believer in the student having to struggle some to understand something and getting away from that traditional lecture. That's something anyone can do with proj-

ect-based learning."

Adams said a school like ECS is not here to take away from the more traditional career and tech centers but to serve a population of students who were not going in that direction but still needed to have an experience that could teach them to work.

"You don't know how many first-year med students I've met that didn't have a clue; our students have a clue," she said.

The student perspective

Most of Adams' students probably don't realize they are part of the overall CTE picture. They do know, however, that learning by doing is fun and exciting and teaches them in a very understandable way.

It also can teach them things way beyond what would be expected in a regular high school setting.

Camille Riebel, a senior student in the ECS biomed program, said one of the projects she worked on had to do with how Gatorade Prime, a pre-workout drink, affected one's EKG, blood pressure and heart rate.

"We gave our trial participants the drink and waited 15 minutes, then measured their heart rate with an EKG, breathing rate and lung capacity (tidal volume) after taking baseline readings," she said. "We ran statistics on whether there was a significant change in the numbers to see if the drink affected any of the participants' vital signs."

Andrew Stewart, another ECS senior, worked with Riebel on the research project graphing the results.

"We wanted to see if the drink got the participants prepared for their physical activity by taking these vital signs before any exercise," he said.

They will compare results to come up with a viable conclusion to their research.

The point of this research is to find something that hasn't necessarily been done before. Adams said the students know better than to bring a simple idea to her when it comes to their research efforts.

Currently, Adams' senior students are researching grant opportunities. Their job is to find a particular grant that would meet the criteria of their senior research projects.

Once that has been accomplished, they turn in the grant to Adams and will make a presentation to an advisory committee.

Adams said this will give them another opportunity to experience a real-world application through their biomed program.

"We follow all of the grant guidelines and do it as though we were turning it in for real," said Riebel. "We'll have 10 minutes to present the idea to a board of judges, which is usually doctors, bio-engineers and people like that."

ECS Bio-Med teacher Dr. Julye Adams worked with senior student Camille Riebel, who is part of a group looking at grant opportunities as part of a senior project. Other students working on the same project include Briana Jurado, pictured at left and Andrew Stewart.

The only tools the students are allowed to use during their presentations are a marker and whiteboard.

Seeking an energy boost

A different ECS student research project studied the effects a popular energy drink has on a user.

"We picked five ideas we wanted to do and we picked this because it's kind of a popular thing right now," said McKayla Thompson, who conducted the project with Mackenzie Burke and Hannah Moyer. "We tested heart rate, blood pressure and metabolic equivalence."

The idea of the project was to check users' vital statistics before consuming the energy drink and again after exercise on a treadmill.

"After the treadmill test, some people did show an increase in their performance rate but their blood pressure and heart rate were often the same, nothing was changing," said Burke.

However, the research did show that some participants experienced a drop in blood pressure and a rise in their heart rates, something that is somewhat unnatural.

Thompson said that wasn't necessarily consistent with all participants, who were of different ages and body weights.

Moyer said the biggest surprise of the research for her was that for the most part the participants didn't feel an increase in their energy level.

While these research projects are part of Adams' classroom activities, she said they can be emulated in other classes in a variety of different ways.

"We all come to biomed because we have different interests," said Burke. "Sure, we did this energy drink research our sophomore year, but the next year I did something completely different."

Adams said her students often come up with ideas for research that she has never thought of before, something that gets her excited about the classroom.

"I push them for that and they don't disappoint," she said. "I want to make them think."

Breckinridge County ATC Joins NASA HUNCH Project

HARNED, Ky. – Machine Tool Technology students at the Breckinridge County Area Technology Center (ATC) are the latest in a growing number of high school Career and Technical Education (CTE) students to become involved in the High School Students United with NASA to Create Hardware (HUNCH).

The school becomes the 67th career and tech center to enter the program.

HUNCH is a collaboration among NASA; the Marshall Space Flight Center in Huntsville, Alabama; the Johnson Space Center in Houston; and high school tech centers in 24 states that use student skills "to study realistic hardware designs and fabricate simulated hardware based on those designs, according to project manager and International Space Station (ISS) Simulation Engineer Bob Zeek.

In exchange, NASA will receive relatively high-fidelity mockups for use in astronaut crew training and engineering design and prototype development, he added.

Zeek recently paid a visit to the Breckinridge County ATC to discuss the mission with students who will be working on the project under the guidance of Dean Monarch, the machine tool technology instructor at the school.

"Ten years ago, we didn't have any training hardware for our astronaut crew or our ground support personnel, so we came up with the idea to go into the career and tech centers and give those students the opportunity to see what they could do with their skills in machine tool, carpentry, welding and electronics," said Zeek.

The hardware produced by these students is integrated into NASA's mockups of the International Space Station (ISS) and used by crews every day in their hands-on environment to train those people who support the ISS.

The HUNCH program has grown considerably over the past few years with more than 1,500 students having come through, some of whom have gone on to work with NASA contractors. There is a postsecondary component to the program, as well.

Zeek noted that the real value of HUNCH, which has been noticed by the educational world, has to do with getting students out of the textbook and into a hands-on environment to create real products.

In April, students who have participated throughout the year will have the opportunity to visit the Marshall Space Flight Center for an awards ceremony and a chance to see their work in use by the NASA organization.

Zeek said that while academic disciplines like science, technology, engineering and mathematics (STEM) are a focus of technical education, HUNCH adds other skills that magnify what participating students are learning.

"STEM is the buzz word now for our tech centers, but all that goes back to the Common Core environment where you have to have the basics to do math and science," he said. "When you put the third dimension in there, of building the part and providing the part and taking it from the beginning to the end, it really expands the whole gamut of the education system for these students."

While the end product is what these students are working toward, Zeek said the experience can also teach students about other aspects of the business, including Quality Assurance (QA) systems, the documentation of the project, including their notes; all the elements of working in industry and getting those students ready to work in industry.

He also pointed out that the HUNCH program isn't isolating students to come just to NASA, but preparing them to work in a number of industries. However, several students have been hired by NASA contractors and are working on the HUNCH staff helping to mentor other students.

Dale Winkler, associate commissioner with the Kentucky Department of Education (KDE), said the HUNCH program falls into place with the Office of Career and Technical Education's Reach Higher with CTE initiative.

"As CTE has moved into a more visible, viable role with our educational partners, we began this initiative to encourage our students to think beyond some of the traditional but still much-needed roles associated with these types of programs," he said. We want our students to imagine using

Students from the machine tool technology program pose with a sign designating them as being a part of the NASA Hunch program.

their skills in areas they may not have connected to their tech-ed studies. NASA HUNCH is a perfect example of a high-tech organization recognizing the value in all of our CTE career pathways."

While Breckinridge County ATC will be the school directly affiliated with NASA, Winkler said he thinks all of the state's CTE students can benefit by knowing such a prestigious organization has stepped to the plate to support technical education in Kentucky.

Monarch said he knows his students will rise to the occasion in creating the machine parts selected for their project and he wants this to be a student-led effort.

"I don't want to be the one who leads this, I want these students to take charge of this project and make it their own," he said.

Monarch's program has long been noted for its excellence in the machining field.

In fact, its placement near the top at the national SkillsUSA competition was what got the attention of NASA.

"They discovered us by looking at the SkillsUSA website and taking note that we had finished in the top 10 at the national event," he said.

Monarch added that the HUNCH program supports several CTE program areas, including computer-aided drafting, computer electronics, auto body technology, welding technology, electrical technology, carpentry, HVAC technology, graphic design and sewing technology.

Zeek said the participation by these students is not just about making a component for the ISS simulator. It goes beyond that.

"It's about learning and what it takes to get from the beginning to the end of the project," he said.

NASA has turned it sights toward many projects, including going into deep space, and will utilize prototypes for ships that will go to Mars. Zeek said the HUNCH program will play a role in getting students involved in projects like that.

"It just makes sense to do this and it gets the students inspired, which is our goal: to inspire the next generation," he said.

Learning that works for Kentucky
CTE™ Reach Higher with CTE

HUNCH
High school students United with NASA to Create Hardware

Bob Zeek, HUNCH project manager and International Space Station (ISS) Simulation Engineer goes over details of the program with some of the students.

Kentucky Becoming the Leader in CTE Academic Integration

For decades there has been a misconception that Career and Technical Education (CTE) and mainstream academics were separate educational entities leading students in separate directions.

But, as the need for more students with real-world work skills has grown, so has the realization that an academic core has existed in CTE programs. The problem has been a matter of speaking two different education languages, one from CTE teachers and the other from their academic counterparts.

A recent report by the Southern Regional Education Board (SREB) regarding CTE in Kentucky found that CTE teachers across the state felt they needed various professional learning opportunities and a focus on the academics to bridge this gap.

The task at hand now is to make that happen, ensuring college- and career-readiness goals are met and students are ready to transition from high school to the next level, be it college, career, apprenticeship, certification training or the military.

As Kentucky strives to become a leader in CTE academic integration, a series of workshops to move that initiative forward is being conducted for 16 schools that have been identified to participate in the Technology Centers that Work network.

Laura Arnold, director of the Division of Technical Schools and Federal Programs in the Office of Career and Technical Education (OCTE), said 16 schools have been identified to participate in the Technology Centers that Work network comprised of teams that include CTE and academic teachers along with school administrators and guidance counselors from each of those school districts.

"We have found that when a dialogue is opened between all parties involved, we are standing on more common ground than we think," she said.

That was evident during a series of workshops undertaken by OCTE to create action plans related to their districts' continuous improvement plans and to bring these two similar educational entities closer together.

Arnold said the first step in doing so was for each team to do an institutional review of the school, where suggestions for improvement were made and strengths were identified.

"Next was a two-day workshop where schools created a continuous improvement plan based on feedback," she said.

After that came leadership training for principals and a teacher-leader, along with training on how to create regional advisory boards.

Dave Leavitt, a consultant for Technology Centers That Work and High Schools That Work, two SREB programs, led the beginning workshops and said Kentucky is helping to change the face of CTE.

"As we have moved from old-school vocational tech-type mentality to true CTE, requiring in-depth exploration, the recognition that really it's just quality education with a CTE theme, that's what we're looking at," he said. "By recognizing and celebrating the academics in technical education, and identifying the standards with our academic teachers, we're able to move forward in that arena of CTE."

Leavitt noted that students have long achieved more when involved with some type of project-based learning.

"It's been a well-kept secret that only about 40 percent of our students learn well from direct instruction," he said. "The other 60 percent, nationwide, learn much better from applied instruction like we do in career and tech-ed."

Dave Leavitt, SREB consultant.

Leavitt added that now the important thing is make sure the quality standards within career and tech-ed are met. He also said that Kentucky has become a national leader in moving CTE forward.

Ultimately, however, it is what business and industry needs by way of qualified employees that should help guide educational endeavors.

Leavitt said education and training has not matched labor needs in the past, and recognizing CTE is a strong effort to match the needs of the country with the workforce we have.

Bringing the academic and CTE worlds together

As the new year begins, two teachers from each participating school, one a beginning teacher and the other a volunteer, will participate in another two-day workshop on basic instructional strategies.

"In addition, There will be a second professional learning experience focused around project-based learning where teachers will select a unit of study. During that three-day workshop participants will begin to plan a true project-based learning experience.

Follow up coaching visits will be made after this workshop to see what progress those teachers have made and make suggestions.

There will be one more workshop to put the finishing touches on the project before another round begins started in June.

Arnold said she would like to see this type of activity expand to more of the Career and Tech centers throughout the state. She emphasized that often academic teachers observe their CTE counterparts and see that academic component being taught, just not with the same language.

"It's a matter of setting aside time to plan the lesson to ensure the same language is being used so a student can make that connection and it will become relevant," said Arnold.

Project-based learning helping students solve future problems now

GEORGETOWN, Ky. – For many young people, the list of the things they need to survive may include computers, smartphones and video games.

But students from Anderson County Middle School (ACMS) have learned what the basic necessities of life really are by way of an innovative classroom project.

The assignment came in their STEM class and was based on Project Lead the Way (PLTW) curricula. The participating students were given a prompt detailing a problem in the future in which the world of plenty as we know it now does not exist. These future scientists, technicians, engineers and mathematicians, who have been living in a biosphere for the last 20 years, must leave the facility in search of supplies that will be brought back and turned into goods they need to survive.

Natalie Frasure, the ACMS STEM teacher, told her group that the challenge was to create a device that will locate or turn their raw materials into the basic staples of life: food, water and shelter.

"They had to create a model of automation that would pump water, grind food (wheat or grain) and saw lumber," she said. "They created a robot that basically does all of that."

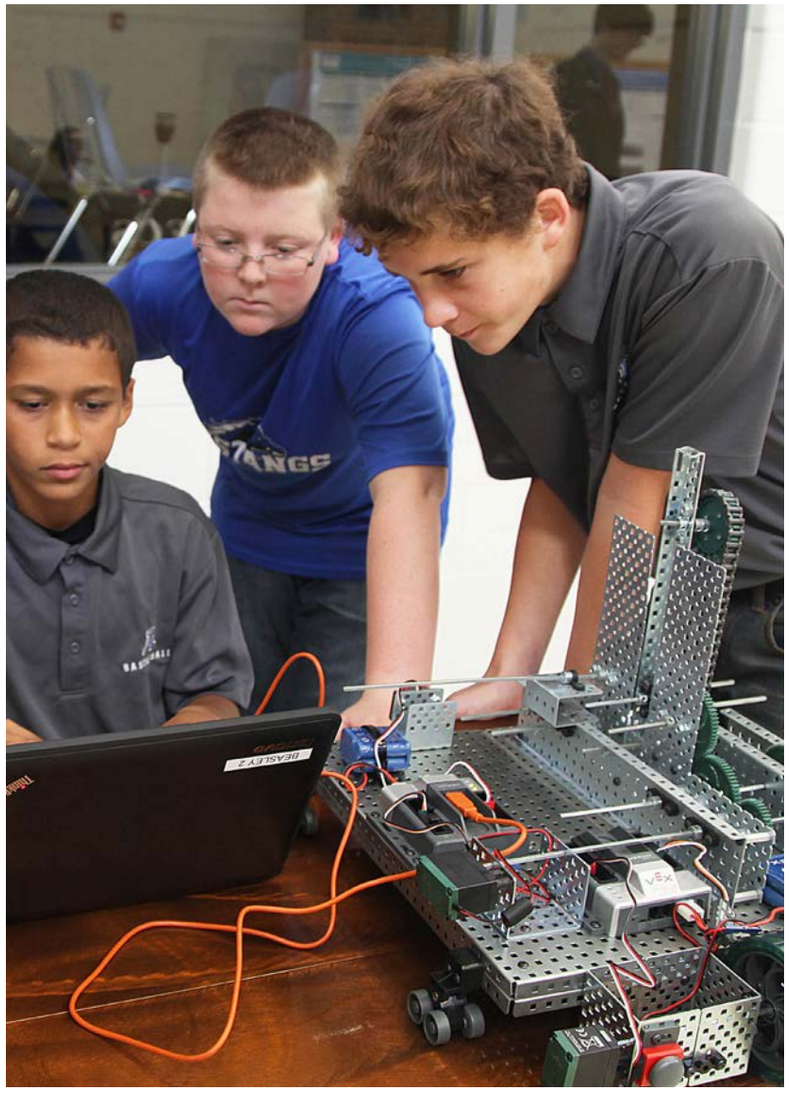
Frasure said the Gateway to Technology program, PLTW's middle school version, began two years ago with a goal of immersing all of the school's students into STEM as a way to decide whether this was a pathway they wanted to take in high school.

"Through project-based learning, the students gain an understanding by way of real-life application. There are real-world problems I present to my students where they will have to use whatever technology is available to try and solve those problems," she said. "We basically put the ball back in their court so the students will look for solutions using science, technology, engineering and math."

This project has been a two-year endeavor. Participating students learned about robotics last year and automation as part of this year's class, all helping in the design of this futuristic machine that has the capability to move around the biosphere and the mechanization to make all three components work independently and at the same time.

"This is obviously a prototype, but now they understand what the basics of life are," she said. "When we had this discussion last year and we talked about what you can't live without, they all said their cell phones."

In a separate component of the project, students learned to incorporate solar panels onto the biosphere to supply power for the other components.



Anderson County Middle School students Tashawn Graves, Nathan Sallee and Brendan Klink look over their STEM project during the 2014 Project Lead the Way Conference held at Elkhorn Crossing School.

Tashawn Graves is one of the three 8th-grade ACMS students who helped to create the multipurpose robot. He said the STEM class has probably been his favorite throughout his middle school career.

In solving the problem for the biosphere, Graves said he knew the group had to create a machine that does multiple tasks with one input of energy. The students depended on their previous knowledge gained in class to figure out the gear ratios needed to make all three components work properly.

"I've tried to find a solution for any project we do in the class. We have had multiple prompts where we have to think outside the box to answer," he said. "Being in this class has made me understand more in other classes like math."

Brendan Klink said he has done well in his science and math classes and that STEM is something he "gets." In coming up with this idea, he knew the mechanism would have to be mobile and would have to be created without a set of instructions.

"We didn't really have a guide to go by to know how to build it, but using a hands-on approach worked and works best for me in learning how to do something," he said.

Participating in the STEM class makes school more fun, said Brendan, who expects to continue his STEM studies in high school.

Nathan Sallee said he really likes to build things, and when he learned of the project, he liked the idea.

"This is the first really in-depth, hands-on project I've done. We had to think it through in our minds before we actually started," he said. "Having been in the STEM class, we were able to take points we had learned to make the process easier. My parents really like where the STEM class has guided me."

All three students said that if faced with a similar problem in real life, they would be better prepared to handle the situation.

The ACMS students and Frasure displayed the robotic invention during the recent PLTW State Conference held at Elkhorn Crossing School (Scott County). Mark Harrell, PLTW Director of School Engagement, Midwest Region said it's very important to expose students to STEM careers as early as possible.

"We engage students in math and science and allow them to apply it in a very hands-on approach to learning," he said.

"The students are in control of their learning, as you can tell by Ms. Frasure's example. They are held accountable to their learning and are given the tools to make them successful to do so."

STEM and PLTW are being used in and being recognized as part of today's CTE classroom, helping to blur the lines of what was once thought of as two different types of education.

Frasure said that many of the careers her students will undertake don't yet exist, so preparing them in areas such as automation, robotics and computer-aided drafting programs (CAD) will set them up for success in those jobs of the future.

"All three of the students that created this project see there is a future career here and what they are learning in class transfers to the real world," she said.

"They see that maybe one of them could be the person who creates the next iPhone … or they could save the world!"

A decade of Construction Career Days

For 10 years, Kentucky Career and Technical Education (CTE) students have had the opportunity to get a firsthand look at the many occupations available in the construction industry at the annual Construction Career Days event.

The two-day experience brings students from all across the state to the Shelby County Fairgrounds to get a hands-on look and feel of what it's like to be on the job in the construction business.

Dozens of companies set up displays, from carpentry demonstrations to the actual operation of heavy equipment, to allow the students a chance to learn about and participate in construction activity.

More than 15,000 students have taken advantage of this opportunity. Many have gone on to further their education or to seek employment in the industry.

The event is hosted by the Kentucky Construction Career Choice Council (K4C), a coalition of industry-related construction organizations that volunteer, exhibit and sponsor events throughout the year to promote the industry and ensure its future workforce.

Lora Knight is the director of member services for the Homebuilders Association of Kentucky (HBAK), one of the founding sponsors of Construction Career Days and a K4C member. She said the number of students attending the event has grown tremendously over the years, something she hopes will continue.

"During the past seven years I have watched Career Days grow into an event that our industry can be proud of," she said. "I am so honored to be a part of Kentucky Construction Career Days through my work at the HBAK. We, the committee, are dedicated to K4C because it provides the students an opportunity to explore the many facets of the construction industry and allows them to see that they can pursue a career that is rewarding and profitable."

This year, more than 2,000 students attended the event. Braxton Webb, an 11th-grade carpentry student at the Southside Technical Center in Fayette County, attended this year's event and said going on the K4C Field Trip was a good experience.

"There were all different types of stations where you could participate. I really enjoyed operating forklifts, cranes, power wash and welding simulators, to name a few," he said.

"It opened my mind up to what I want to do in my life. I would definitely recommend this field trip for others because it's a great learning experience and you have a good time with your friends."

Robby Arrasmith, a project executive with Messer Construction, said the event has been very beneficial for the company, local communities and the students.

Even though the electrical components in this photo were not connected, students still got a realistic experience in working with electricity as part of this demonstration at the 2014 Construction Career Days event.

"K4C Career Days is the only construction career fair in which you can touch students from across our entire state," he said.

"Messer is constantly looking for candidates for our craft and management force. If we can get just a handful of the students that come to the career fair interested in construction, we see this as a success."

Messer is a large construction manager, and if the company can also find workers to help its subcontractors' workforces grow, this helps them and the entire industry, Arrasmith said.

Mac Crawford, also with HBAK, said the organization is constantly looking for ways to promote workforce development.

"As a sponsor and participant of the Kentucky Construction Career Days, HBAK is providing students with an avenue for success while exposing them to a career in residential construction along with many other facets of the construction industry," he said. "We are thrilled that this event reaches so many of Kentucky's high school students."

Most construction-related jobs are experiencing a numbers increase and will continue to do so through 2022, according to the Department of Labor's Bureau of Labor Statistics. In fact, some of these jobs will grow by as much as 25 percent.

Mary Taylor, Office of Career and Technical Education (OCTE) business and industry specialist, said it's critical to the future of the industry to introduce it to a new generation.

"As the average age of those in the construction industry increases, so does the need to have replacement workers once current employees retire," she said.

"Construction Career Days has been one of the most useful tools we have for students as well as industry leaders to discover each other."

Taylor, who is also a K4C board member, added that many of the students who come to the event can now become involved in pre-apprenticeship programs related to the industry while still in high school.

"There are so many benefits in starting these careers at the high school level," she said. "These students will have a huge advantage when they begin their workforce careers, and this event is a great way to get that started for them."

Henderson County FCS teacher recognized at Kentucky Teacher of the Year ceremony

FRANKFORT – Career and Technical Education (CTE) was recognized well in 2014 with the announcement that a Family and Consumer Sciences (FCS) teacher had been named a semifinalist for Kentucky Teacher of the Year honors.

Emily Johnston, an FCS teacher from Henderson County High School, was selected because of her exceptional work in that school's early childhood education (ECE) program.

Henderson County is home to the Thelma B. Johnson Early Learning Center, a pre-school facility that provides students in the ECE program a hands-on environment to get real-life work experience in the preschool classroom.

"My students travel to the center, where they participate in work-based learning three periods each day," said Johnston. "The first nine weeks they get extensive training and after that I place them in preschool classrooms. I do student walk-throughs to make sure they are doing what they need to be doing as a preschool teacher."

Johnston said there is a great need for workers in the early childhood development sector, whether in child care or early childhood education, and this program gives students a head start on those careers.

"My students have a great advantage because they are getting two certifications, and some of my students excel and also get the national Child Development Associate (CDA) credential," she said.

The CDA is a nationally recognized credential for excellence in early childhood education. Johnston said her students were the first in Kentucky to receive the honor.

"I think there's a great need for students in the field of early childhood development because they are taking care of our children and it all starts here," said Johnston.

Brian Bailey, assistant principal at HCHS said, as an administrator it is an honor to work with teachers such as Johnston.

"She puts everything she has into her profession each and every day. Her leadership in the ECE program has helped us develop an exemplary program which allows us to provide the very best experience for our students," he said. "I am proud that Ms. Johnston was able to represent CTE at the awards ceremony."

Kayla Godbey and Reeca Carver, family and consumer science consultants in the Office of Career and Technical Education, described Johnston's programs as "state of the art" and noted that her students have been very successful in achieving the Commonwealth Child Care Credential and their CDA.

"The CDA is a rigorous process where students earn 120 hours of training, 480 clock hours of experience and take a national exam, complete a two-hour observation and a one-hour interview and portfolio," said Godbey. "It is the most widely recognized credential in early childhood education and a key steppingstone on the path of career advancement in ECE that not many achieve while still in high school."

Emily Johnston, an FCS teacher from Henderson County High School, was selected as a semi-finalist for Kentucky Teacher of the Year honors.

Carver said Johnston has done an excellent job in building the program at the school and her administration has been very supportive.

"Ms. Johnston well represents the profession of FCS education as a recipient in the Ashland Teacher of the Year Awards program and is very deserving of this award," she said.

Johnston said her students have the ability to move on to a postsecondary program or straight into the workforce once they have completed her program.

"They can either go straight into the field and work in child care or move on to the college level and get their associate or bachelor's degree in ECE," she said.

In addition to her duties with Henderson County, Johnston also teaches ECE classes at the Henderson Community College. She said there is a great connection between the two schools and that all of her students get dual credit.

As an FCS teacher, Johnston recognizes the importance of the program and noted how diverse FCS is and how students can benefit from it. She also said she is proud to represent CTE as a whole.

"It's very important in the field of education, especially for accountability purposes in Kentucky now," she said. "I believe we are the future, we are the vision and we need people here who have the background, skills and credentials for the jobs in Kentucky."

She added that she thinks CTE is receiving more positive reinforcement in education and people are seeing the importance of CTE in communities and throughout the nation.

"I only see CTE getting bigger and more important," said Johnston.